DOCUMENT RESUME

ED 248 237 SP 025 172

AUTHOR Bozzo, Robert
TITLE Evaluation of Programs for the Promotion of Physical Fitness and Exercise. Final Summative Report. Report No. 12.
INSTITUTION Granville Corp. Washington, DC.
SPONS AGENCY Public Health Service (DHHS), Rockville, MD. Office of Disease Prevention and Health Promotion.
PUB DATE 29 Oct 83
CONTRACT 282-78-0183
NOTE 37p.; For Report No. 3-11, see SP 025 165-171.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Athletics; *Community Programs; *Exercise; *Federal Programs; Needs Assessment; *Physical Fitness; Program Development; *Program Evaluation
IDENTIFIERS *Presidents Council on Physical Fitness and Sports

ABSTRACT

This report describes the history and content of a 4-year research effort on the status of programs for promoting physical fitness and exercise. Two phases of the research work are covered. Discussion on Phase One, initial assessment and design, includes: (1) identification of the President's Council on Physical Fitness and Sports programs; (2) assessment of program operations; (3) literature review and synthesis; and (4) evaluation methodologies. Information provided by Phase Two, implementation of evaluation methodologies, includes: (1) assessment of the establishment and operations of the seven Governor's Councils; (2) testing and awards programs; (3) consumer-initiated public information and sponsor-initiated public information; (4) inventory of health- and physical fitness-related literature and research; (5) assessment and comparison of three fitness and health promotion delivery systems; (6) community fitness programs, employee fitness programs, and Demonstration Center Schools; (7) the nature and extent of community and employee fitness programs; and (8) development of physical fitness and exercise measures. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

SP

Office of Disease Prevention and Health Promotion

ED248237

FINAL SUMMATIVE REPORT
EVALUATION OF PROGRAMS FOR THE PROMOTION OF PHYSICAL FITNESS AND EXERCISE

REPORT NO. 12

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

U.S. Department of Health and Human Services Public Health Service Washington, D.C. 20201

SP 025 172

FINAL SUMMATIVE REPORT
EVALUATION OF PROGRAMS FOR THE PROMOTION OF PHYSICAL FITNESS AND EXERCISE

REPORT NO. 12

Office of Disease Prevention and Health Promotion

Department of Health and Human Services
October 29, 1983

This report is made pursuant to Article III, Paragraph 13b of Modification 14 to Contract No. 282-78-0183-DN. The person with management and professional responsibility for the contents of the report is Robert M. Bozzo.

Contractor:

Granville Corporation
Health and Human Services Group

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
II.	PHASE I: INITIAL ASSESSMENT AND DESIGN	3
	Identification of PCPFS Programs	3
	Assessment of Program Operations	4
	Literature Review and Synthesis	5
	Evaluation Methodologies	6
III.	PHASE II: IMPLEMENTATION OF EVALUATION METHODOLOGIES	16
	Assessment of the Establishment and Operations of Seven Governors' Councils	16
	Testing and Awards Programs	18
	Consumer Initiated Public Information and Sponsor Initiated Public Information	20
	Inventory of Health and Physical Fitness-Related Literature and Research	21
	Assessment and Comparison of Three Fitness and Health Promotion Delivery Systems	23
	Community Fitness Programs, Employee Fitness Programs, and Demonstration Center Schools	26
	The Nature and Extent of Community and Employee Fitness Programs	26
	Development of Physical Fitness and Exercise Measures	28
APPENDIX—LIST OF REPORTS		32

I. INTRODUCTION

The purpose of this report is to describe the history and content of The Granville Corporation's performance of Contract No. 282-78-0183. Over a period of four years, beginning in October of 1978, Granville has conducted a number of separate study efforts to provide evaluative support to the Office of Disease Prevention and Health Promotion (ODPHP) in the prevention area of exercise and physical fitness. The contract extended through October 29, 1982.

The original purpose of the contract was focused mainly on the operations and program initiatives of the President's Council on Physical Fitness and Sports. The Council is a Presidentially appointed body whose members serve without pay to guide national initiatives in the areas of fitness and non-professional sports. Members of the Council typically are drawn from the medical, educational, and sports communities based on their prominence, interest, and background in issues relevant to the promotion of fitness and sports-related activities. The Council also has a professional staff which supports its activities and carries out its directives. At the time this contract was issued, the Council's staff was organizationally placed in the Office of Special Health Initiatives (OSHI) (redesignated in January, 1979 as ODPHP) in the Office of the Assistant Secretary for Health.

Because the Council's staff was a unit of OSHI/ODPHP, the administrative and budgetary guidelines of that office had to be followed. In addition, ODPHP perceived there to be a substantial commonality of interest and overlap of responsibility between itself and the Council concerning programmatic issues. Physical fitness was one area of concern to OSHI/ODPHP in its efforts to develop and implement a comprehensive health promotion and disease prevention strategy. In view of the organizational placement of the Council's staff and the mutual concern with fitness policy and promotion, OSHI found it appropriate to take action

which would enhance its understanding of the operation of the Council and its staff, as well as its understanding of the effectiveness of various fitness-related programs.

Before launching into a specific description of activities conducted during the life of the contract, it should be noted that there were two major phases, each funded separately. The first phase was primarily oriented to the design of strategies for evaluating fitness programs implemented or sponsored by the Council and its staff. Other aspects of the first phase were a short-term assessment of the Council's program operations and a review and synthesis of literature concerning the design and evaluation of health promotion campaigns.

The second phase of the contract involved the actual conduct of evaluative activities based on the plans developed in the first phase. Six separate studies eventually were performed. As described more specifically later in this report, several modifications were made in the scope of work which shifted the original emphasis away from the President's Council and its programs. The modifications led to performance of a more diversified set of activities designed to aid ODPHP in coordinating efforts to pursue that subset of the national disease prevention and health promotion objectives for 1990 relating to physical fitness and exercise.

The remainder of this report is devoted to a relatively specific description of the work carried out in each of the two major phases. It specifies the topics covered, the major deliverable products, and other important events or decision points.

II. PHASE I: INITIAL ASSESSMENT AND DESIGN

The first phase of the contract began with the development of a work plan. Based on discussions with the Project Officer and review of available documentation, the plan added more specificity to the description of the intended work which had been presented in Granville's original proposal. The following major steps were specified:

- Identifiy and describe the Council's programs
- Assess the manner in which the Council and its staff operate
- Produce brief descriptions for review and selection by ODPHP of options for evaluating Council-sponsored programs
- Further develop those evaluation options selected by ODPHP
- Review and synthesize literature on the design and evaluation of health promotion campaigns.

Each of these steps is described briefly in the following sections.

IDENTIFICATION OF PCPFS PROGRAMS

Granville reviewed various documents such as recent program initiatives, newsletters, and annual reports and interviewed all senior members of the Council's staff. These activities were actually carried out by sponsors or surrogate parties. A major feature of the Council's staff's approach was to use its limited resources to prompt, assist, and endorse actions taken by others. It quickly became apparent that it would not be feasible to develop or implement methods for evaluating individual programs. The approach taken was to group the program activities associated with the Council and its staff into clusters. Each cluster was

to represent a different type of program. The criteria for clustering were that programs should have similar intended outcomes and that they should be amenable to common evaluation approaches. Based on these criteria, four major categories covering ten clusters were developed. The names of the categories and clusters are listed below. Detailed descriptions are contained in the report entitled Description of Program Clusters submitted on January 10, 1979.

- Public Information
  - -- Sponsor Initiated
  - -- Consumer Initiated
- Fitness Programs
  - -- Community Programs
  - -- Employee Programs
- Participatory Events
  - -- Competitions, Testing and Awards
  - -- Special Public Events
- Capacity Building and Sharing
  - -- Demonstration Center Schools
  - -- Governors' Councils
  - -- Information and Knowledge Development
  - -- Leadership Training

ASSESSMENT OF PROGRAM OPERATIONS

Following the initial examination and definition of the Council's programs, Granville moved ahead to a more intensive look at Council operations in the context of management practices. The investigation included additional interviews with the Council's staff and ODPHP management, extensive review of project files and on-site interviews with several co-sponsors of programs. The topics covered in that assessment were:

- Origins and trends of council programs
- Organizational structure
- Council goals and priorities

- Relationships within HHS and with other government agencies
- Program planning and decision making
- Program management
- Program effectiveness
- The role of the council.

As with other study activities described in this summative report, no attempt will be made to recount the findings of this assessment. The reader is referred to the report entitled Assessment of Program Operations, submitted May 15, 1979.

LITERATURE REVIEW AND SYNTHESIS

A task separate from the examination of the Council's programs and the subsequent development of evaluation methodologies was the conduct of a review of literature regarding the design and evaluation of health promotion campaigns. This was a topic of interest to ODPHP in the context of the Council's ongoing programs of public service advertising and dissemination of printed information. It also was of interest in view of ODPHP's efforts to develop its own health promotion programs. Granville, with heavy involvement by its subcontractor Market Facts, Inc., reviewed numerous books and journals to present discussions of design issues and evaluation issues. The design issues were presented in the framework of five categories of issues:

- Source of the message
- Content of the message
- Manner in which the message is transmitted
- Audience for whom the message is intended
- Expected effects on the audience.

Issues regarding evaluation of promotional campaigns were presented in terms of the need for and means of controlling evaluation through use of quasi-experimental designs, the factors in-

volved in selecting test sites, the implications of donated air time for evaluation design, problems associated with measuring recall of messages, and measuring the play of public service advertisements.

The literature review also included abstracts of Federally-sponsored promotional campaigns having a health or safety theme. The abstracts were prepared by Granville based on interviews with campaign managers and designers and review of materials.

Finally, the review included:

- A list of campaigns identified but not abstracted
- A list of health and safety promotion films distributed by the National Audio Visual Center
- A list of health promotion television and radio campaigns obtained from the Advertising Council.

The Literature Review and Synthesis Report was submitted to ODPHP on May 30, 1979.

EVALUATION METHODOLOGIES

The program clusters described earlier formed the framework for development of methodologies for evaluating fitness-related programs conducted or sponsored by the President's Council and its staff. The process employed was for Granville staff to assemble a series of preliminary designs, referred to in the project as "Design Concepts." For each of the ten clusters, Granville outlined one or more options for each evaluation. Each cluster was discussed in terms of:

- Evaluability
- Types of outcome
- Measures
- Explanatory Variables
- Research Questions

- Design Considerations
- Estimated Cost.

Two reports were submitted. One, Design Concepts for Evaluating Mass Media Programs was submitted on June 8, 1979. The other, entitled Design Concepts for Evaluating Fitness and Capacity Building Programs and Participatory Events was submitted on June 20, 1979.

Following review by ODPHP of the design concepts, Granville was asked to develop more detailed evaluation designs for seven of the ten clusters. The methodologies are summarized below.

Community Fitness Programs

Implementation of the methodology for this cluster was to have three phases as follows:

- Phase I: Initial Program Assessment. This was to be a mail survey of a sample of about 250 programs and program sponsors. Its aim was to obtain descriptive program information from both structured and "facilities only" programs.

- Phase II: Program Selection. Data collected in Phase I was to be analyzed to determine how community fitness programs differ. This analysis would permit selection of a subsample of programs for further investigation.

- Phase III: Participant Group Comparisons. This portion of the study was aimed at obtaining information regarding the differential impact of community fitness programs as a joint function of program type and participant characteristics. Data was to be collected on site from persons participating in the selected programs. The study design called for two measures, about six months apart.

The following paragraphs briefly describe the activities which must be performed for each of the phases.

Phase I. The mail survey instrument was to be pretested in a maximum of nine known programs and recreation departments as the final step toward finalizing the instrument. It then was to be submitted for OMB clearance (a period of 90 days was assumed). It should be noted that the Phase III participant instrument also was to be submitted for clearance at that time, thus making for only one OMB clearance request for the Community Fitness cluster.

As described in The Evaluation Methodology, the plan called for Granville to assemble lists of the known community fitness programs. This universe was to be stratified with reference to program type, community size, census region, and sponsorship. Different proportions of each group were to be sampled.

Once OMB clearance was received and the instruments finalized, they were to be printed using a booklet format and mailed to the sample programs. Non-respondent follow-up was to be performed according to a procedure and time frame described in the Evaluation Methodology.

As the mail survey questionnaires were received, they were to be edited, coded, and keypunched in preparation for computer analysis. The data were to be entered into a computer file whereupon specified tabulations and cross-tabulations would be generated. The design provided for the use of appropriate statistical techniques to ensure that the interesting relationships between program descriptors would be explored. A survey report was to be prepared at the end of Phase I.

Phases II and III. Based on the data generated and analyzed in the mail survey, a subsample of programs were to be selected for on-site examination. Phase I survey data were used to be subjected to regression analyses and factor analysis to produce a list of programs grouped according to variables that cluster together to differentiate programs. This was to provide the basis for the final selection.

Once the sites were selected, the local program implementors were to be notified that field work for a participant study is about to commence. The field staff, which we estimate will number about six, will be trained and will start the visits which should be completed within eight weeks. Twenty sites, including four with control groups, were assumed for scheduling and estimating the required level of effort.

The second round of on-site data collection was to take place four to six months after the first round. Editing, coding, and keypunching was to be done separately for each round of data collection to expedite the final analysis and report writing which was to begin near the end of the second round. The study plan provided for draft and final Phase III reports.

Employee Fitness Programs

The study envisioned for this program cluster was a mail survey of about 250 employee fitness programs. This survey design was aimed at producing a limited cross-sectional comparison of program structure, content, and participant usage patterns.

The first step was to conduct a final pretest. Once necessary modifications had been made, an OMB clearance package was to be prepared and submitted. Ninety days were assumed for obtaining clearance.

During the OMB clearance period, an up-to-date list of programs was to obtained from AAFDBI and a sample was to be selected. When OMB clearance was obtained, required revisions were to be made and the instrument printed and mailed. The Evaluation Methodology included provisions for follow-up of non-respondents.

As the completed questionnaires were received, they were to be edited, coded, keypunched, and entered into a computer file. The data were then to be analyzed as described in the Evaluation Methodology; draft and final survey reports were to be submitted.

Demonstration Center Schools

For this program cluster, a study was developed to assess the extent to which Demonstration Center Schools had:

- Upgraded their physical education curricula as a result of the program
- Promoted their curricula and the program
- Influenced other schools to upgrade their physical education curricula.

The study was to be carried out by means of a mail survey of state education agencies (SEAs) and all Demonstration Center Schools.

Implementation was to begin with a final pretest and revision of the instruments, followed by preparation and submission of an OMB clearance package. During the assumed 90-day clearance period, lists of the SEAs and Demonstration Center Schools to be obtained.

Upon receipt of OMB clearance and completion of all necessary revisions, the instrument was to be printed and mailed. Follow-up of non-respondents was to take place two weeks later.

Survey data were to be edited, coded, keypunched, and entered into a computer file. Analyses were to be performed in terms of the five issue areas described in the Evaluation Methodology.

Consumer Initiated Public Information

This cluster focused on the PCPFS's distribution of pamphlets and booklets. A study was designed to measure the effectiveness of some of these materials in terms of their impact on the attitudes and actions of the requesting individuals. The study was to be a telephone survey of those requesting either general or specific fitness information. Some requestors were to be surveyed after receipt of the information while others were to be surveyed before receipt. The design called for subjecting

both groups to a follow-up measure. The makeup of the experimental and control groups and the timing of the measures were described in the Evaluation Methodology.

Implementation of the design was to begin with the final pretesting and modification of the instruments and the preparation of an OMB clearance package. As with the other program clusters for which OMB approval was required, a 90-day period was assumed.

Selecting a sample of potential respondents was to be accomplished by monitoring the flow of information requests as they were received by the PCPFS. The sampling procedure was described in the Evaluation Methodology. As the samples were selected, telephone interviews were to be conducted according to data collection procedures and a survey schedule described in the Evaluation Methodology. The second (follow-up) wave of interviews was to begin while the first wave was being completed.

The mechanical tasks of editing, coding, keypunching, and data entry were to be performed upon completion of the interviews. These activities were to set the stage for data analysis which, as described in the Evaluation Methodology, was to:

- Compare results of the initial and follow-up measures on the experimental group to determine the sustained impact of the literature
- Compare the two control group measures to determine the initial impact of the literature
- Compare the first measures of the experimental and control groups (after the literature and before the literature)
- Compare the second measures of the experimental and control groups as an additional indication of sustained impact
- Compare the demographic variables of the experimental and control groups.

The analysis was to be presented in a draft and a final survey report.

Sponsor Initiated Public Information

To evaluate the Council's public service announcements (PSAs), two laboratory studies were designed. The first was to examine the effectiveness of the PSAs when presented alone; the second was to examine their effects in combination. The PSAs to be evaluated consisted of four radio and television messages aimed at parents of schoolchildren.

Both of the studies were to be carried out at geographically dispersed locations where respondents would be recruited to participate, exposed to the PSAs, and interviewed.

Instruments were developed and presented in the Evaluation Methodology. The first step in implementing this study was to be a final pretest of the instruments, as well as the field procedures, i.e., recruiting participants and playing the PSAs. Upon completion of this testing and resultant modifications, an OMB clearance request was to be prepared. Ninety days were assumed for obtaining clearance. As soon as OMB clearance was received, the instruments were to be printed and the field staff trained. This was to be followed by the start of data collection in three field office facilities. For scheduling purposes, a period of three months was planned for the fieldwork.

The Evaluation Methodology called for each of the 12 PSAs tested separately to be seen or heard by 50 subjects with a control group of 100, i.e., a total of 700 respndents. Each of the six pairs of PSAs was to be seen by 50 persons, again with a 100 person control group. Thus, the study required a total of 1,100 respondents. The Evaluation Methodology also presented alternative methods of recruiting participants. Specifically, recruitment by encounter in a public place such as a shopping center was discussed, as was the telephone recruitment using a random digit dialing approach. ODPHP's technical reviewers expressed a preference for the latter approach depending on the required level of effort.

Granville prepared three estimates of the level of effort as follows:

- A maximum effort which included the 1,100 respondents described above and employed the random digit dialing recruitment technique
- A mid-level effort which called for 1,110 respondents, but relied on recruitment by enounter (intercept)
- A lower level of effort which called for only 660 respondents; (30 per treatment group and 60 per control group) and again relied on intercept recruiting.

Upon completion of interviews in the field, they were to be edited, coded, keypunched, and entered into a computer file in preparation for analysis. The analytic approach was described in the Evaluation Methodology. Draft and final reports were to be prepared and submitted.

Testing, Awards, and other Competitive Events

As described in the Evaluation Methodology, the study envisioned for this cluster focused on two Council-sponsored programs, the National Track and Field Youth Program and the Presidential Physical Fitness Award Program. The study was to involve on-site visits to ten metropolitan areas and interviews with ten local implementors in each. Implementors of the two programs at the national level also were to be interviewed. The aim of the study was to determine the operational characteristics of each program and to identify their effects on other community-based programs.

Interviews guides for both sets of respondents were presented in the Evaluation Methodology. The first step was to conduct a pretest of these instruments on a small number of implementors, whereupon they would be finalized as necessary. At the same time, national implementors, some of whome were already known and identified in the Evaluation Methodology, were to be identified so that interviews could begin as soon as the inter-

view guides were in final form. As the national level interviews were being conducted, Granville was to work with the Project Officer, and possibly the Council staff and some of the national implementors to identify the ten areas to be visited. Visits were then to be scheduled and carried out over a two-month period.

The analysis and report writing phase of the study was to begin as site visits were completed. The analysis was to be largely qualitative. Draft final and final reports were to be submitted.

Governors' Councils

For this program cluster, case studies were to be performed in six states to examine the process by which Governors' Councils were established and structured and how they operate. The role of the PCPFS across all these dimensions would be explored.

The first step in implementing the study was to be selection of the six states to be examined. The Evaluation Methodology indicated the use of Council age, funding, and regional distribution as criteria for selection.

The next step was to be to test and finalize the interview guides presented in the Evaluation Methodology. The plan was to conduct a visit to one of the six states in advance of the other five and to modify the interview guides as necessary before proceeding with the remaining visits. The Evaluation Methodology contained an explanation of the scheduling and data collection procedures.

Analysis of the resulting information was to be two-tiered in that the detailed case study of each of the six states was to be accompanied by an overall or summary assessment which indicates common findings and relationships across states.

Schedule for Implementation

The total time set forth for implementation of the seven methodologies was 19 months. The plan was to stagger the implementation to ensure smooth start-up in each one and productive use of down time on those designs requiring OMB clearance.

The implementation schedule was developed along with final proposed costs in the Spring of 1980. These efforts and associated negotiations with ODPHP resulted in a modification to the contract. That modification, dated June 20, 1980, extended the contract to December 17, 1981 and added $327,276 to finance performance of the work called for by the seven evaluation methodologies. Because of subsequent unforeseen delays and changes in the scope of work, the period of performance was extended, the eventual ending date being October 29, 1982. The changes in the work anticipated in the Evaluation Methodologies are presented in the following chapter.

III. PHASE II: IMPLEMENTATION OF EVALUATION METHODOLOGIES

As noted earlier, the purpose of the second phase of the contract was to carry out the study activities called for in the evaluation methodologies. This section of the Final Summative report describes the implementation activities, indicating specific features not covered in the preceding descriptions of the study designs. Those features include specific programs examined/sites visited, modifications to the original methodologies, and dates and descriptions of final reports. No attempt will be made here to describe specifically the findings of each study. Readers are referred to the individual study reports. The following sections are presented in the order in which the studies were completed.

ASSESSMENT OF THE ESTABLISHMENT AND OPERATIONS OF SEVEN GOVERNORS' COUNCILS

The establishment of Governors' Councils on Physical Fitness has been a major goal of the President's Council. The idea of Governors' Councils is to establish formally another tier in the fitness promotion and service delivery system whereby initiatives can be conceived and carried out at subnational levels. Just as the President's Council has a national purview, Governors' Councils would serve as focal points for developing fitness initiatives in the states. This study was to provide information on successes, problems, and prospects for development of the Governors' Councils based on an examination of six existing Councils. A seventh state was added late in the study to obtain more information about the operation of viable Councils.

Using the criteria regarding age, operational status (active or terminated), geographic region, and provision of state funding, the following states were chosen:

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
II.	PHASE I: INITIAL ASSESSMENT AND DESIGN	3
	Identification of PCPFS Programs	3
	Assessment of Program Operations	4
	Literature Review and Synthesis	5
	Evaluation Methodologies	6
III.	PHASE II: IMPLEMENTATION OF EVALUATION METHODOLOGIES	16
	Assessment of the Establishment and Operations of Seven Governors' Councils	16
	Testing and Awards Programs	18
	Consumer Initiated Public Information and Sponsor Initiated Public Information	20
	Inventory of Health and Physical Fitness-Related Literature and Research	21
	Assessment and Comparison of Three Fitness and Health Promotion Delivery Systems	23
	Community Fitness Programs, Employee Fitness Programs, and Demonstration Center Schools	26
	The Nature and Extent of Community and Employee Fitness Programs	26
	Development of Physical Fitness and Exercise Measures	28
APPENDIX—LIST OF REPORTS		32

- Minnesota
- Kentucky
- Wisconsin
- Texas
- Pennsylvania
- Arkansas
- New Jersey

On site visits were made to each of these states to interview key actors involved with the Councils. These interviewees included Council chairpersons, staff members, representatives of Governors' offices and individuals who worked with the Councils in their establishment or program activities.

Each site assessment resulted in a case study report which described the following topics:

- Establishment and history
- Organizational structure
- Purposes and objectives
- Program operations
- Involvement with the President's Council
- Expectations for the future.

These state-specific write-ups were included as chapters in the final assessment report. The report also included an overview and cross-site analysis organized according to the same topics listed above for the individual state write-ups.

The final assessment report was submitted to ODPHP on July 21, 1981 following review and comment on a draft report by ODPHP and the President's Council's staff.

TESTING AND AWARDS PROGRAMS

The President's Council for some time has given its backing to various programs aimed at promoting greater participation by children and youth in sports and exercise. Many of these programs have a competitive aspect in which participants must succeed against other participants or established norms of exemplary performance. Typically, successful participants advance to higher levels of competition and/or receive awards. In view of the diversity of such programs, two were selected for examination. The Presidential Physical Fitness Award Program, co-sponsored by the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), was chosen as representative of the program sub-type emphasizing performance measurement in terms of normative standards. This program is implemented primarily in schools using AAHPERD's Youth Fitness Test. The Hershey's National Track and Field Youth Program was selected to represent programs involving direct competition between participants. Sponsored by the Hershey Foods Corporation, the program is implemented through recreation departments and other community-based organizations.

For each program, national level sponsors/implementors were identified and interviewed to provide an overview of program conception and development. To examine local level implementation, ten states were visited. In each state, three local implementors of each program were identified and interviewed. The states visited were:

- Georgia
- Maryland
- Michigan
- New York
- California
- Louisiana
- Minnesota
- Virginia
- Washington

The states were divided according to the existence of a Governors' Council to determine whether or not the councils affected the implementation of the program. The first five states listed above had Governors' Councils at the time of the assessment.

In addition to the approach described above, it should be noted that in the case of the Presidential Physical Fitness Awards program, every effort was made to choose local implementors in each site which covered three levels of schools (elementary, junior/middle, high). In the case of the Hershey's program, a State Coordinator was identified in each state and interviewed.

The resulting final report presented an overview, cross-site analysis, and summary and conclusions for each program. The cross-site analyses covered the following topics:

- Program objectives
- Administrative structure
- Fitness testing policies
- Length of participation
- Program operation
- Eligibility and selection criteria
- Promotional activities
- Funding sources
- Facilities.

Case study reports were produced for each site and submitted as a separate appendix to the final assessment report. The final report was submitted to ODPHP on July 25, 1981. An earlier draft was reviewed by ODPHP and a member of the President's Council's staff.

CONSUMER INITIATED PUBLIC INFORMATION AND SPONSOR INITIATED PUBLIC INFORAMTION

The evaluation methodologies originally proposed and agreed upon for these two studies is summarized briefly in the preceding chapter. However, their implementation proved infeasible early in Phase 2 of the contract. These studies required access to materials used by the President's Council's staff. The Consumer Initiated Public Information study required information concerning the literature being sent to requestors and information regarding the list of requestors. The latter item required ongoing assistance by the Council's staff or permission for Granville's staff to sort through request on a regular basis. The Sponsor Initiated Public Information study required copies of the scripts of some of the Council's public service advertising radio and television "spots" and copies of the tapes or films. These needs were communicated to the Council's staff through the Project Officer, Dr. Donald Iverson, in the Fall of 1980. Based on a decision by the Council not to be involved in the efforts being made through this contract to evaluate the activities of the Council, its staff or its cosponsors, the staff declined to furnish the needed support.

Unable to proceed with the studies planned for these two program clusters, In December 1980, Dr. Iverson discussed with the Granville Project Director and Project Manager the possibility of providing other forms of evaluative support to ODPHP in its efforts to pursue the Objectives for the Nation for 1990 in the area of fitness and exercise. These discussions resulted in ideas for two studies which would require levels of effort equivalent to those planned for the two public information evaluations. These alternative study concepts were presented to Deputy Assistant Secretary of Health, Dr. J. Michael McGinnis, who agreed to their implementation. Granville proceeded to prepare descriptions of the proposed work, including schedules, deliverables, and costs in preparation for review by the Office of the Assistant Secretary for Planning and Evaluation and sub-

sequent contract modification. After a lengthy review process, the proposed changes were approved and the contract was modified effective April 9, 1981. Consumer Initiated Public Information was replaced by a task entitled "Inventory of Health and Physical Fitness-Related Literature and Research." Sponsor Initiated Public Information was replaced by an "Assessment and Comparison of Three Fitness and Health Promotion Delivery Systems." These studies are described in the following sections.

INVENTORY OF HEALTH AND PHYSICAL FITNESS-RELATED LITERAUTRE AND RESEARCH

The purpose of this effort was to identify, collect, and catalogue the various fitness-related and other health promotion materials available to the general public by Federal, State, and local government agencies, as well as those related informational items distributed by the private sector. Printed materials included in the compendium were categorized as follows:

- Currently available brochures and pamphlets costing no more than three dollars per single copy. Note in-depth materials and monographs were not been included.
- Selected articles from popular magazine and newspapers published since 1980
- A catalogue of public service announcements relevant to the promotion of fitness and health
- Fitness-related research projects (inventoried and catalogued) funded by the Federal Government between FY 1981 and FY 1982.

The brochures and pamphlets were collected by a series of mail and telephone contacts with an extensive list of Federal, State, and private agencies. More than 400 brochures/pamphlets were collected; about a third were found to focus on fitness and exercise. Each of these fitness-related documents was listed and described according to publisher, distributor, cost, type of ma-

terial, intended audience, fitness-related content area, level of detail, readability (using the "SMOG" grade formulation) and recommendations. The format used in preparing the abstracts was selected to be consonant with that used in the National Health Information Clearinghouse. The materials were cross-referenced by distributor and intended audience.

Periodicals of general interest included two newspapers (New York Times and Washington Post) and eight popular magazines.

Newspaper and magazine articles appearing in the publications selected were searched using the Lockheed DIALOG Data Base Catalog System. DIALOG is a computer-assisted research system which is available at most federal libraries. The search included scanning selected publications for relevant articles appearing from mid-1980 through October/November 1981. The search was performed for two sets of key words: physical fitness and exercise. Bibliographic references were obtained from this search, articles located and scanned. Section 5 of the Compendium presents an alphabetic listing of these articles. Also included in each entry was: reference information, content area, and a brief synopsis.

Through the list of contacts identified in the literature search, Granville obtained information about relevant public service advertisements, as well as films available through various agencies, companies, and associations. Each entry included information concerning the availability and use of materials such as address of distributor, cost, equipment requrements, type of materials (i.e., radio and television announcement, film) and ordering information.

The compendium also included a listing of all current Federally funded research projects (FY 1981 and FY 1982) dealing with the topics "physical fitness" and "exercise." The list was obtained from the Smithsonian Scientific Information Exchange. The listings present for each project the level of funding (if available), sponsor, senior researcher and affilitation and up to a 250 word narrative containing the title and description of the

study. Note that the listing obtained from SSIE was organized according to type of research, i.e., basic, clinical, epidemiological, or educational program. Within each category of research, entries were grouped by sponsoring organization.

ASSESSMENT AND COMPARISON OF THREE FITNESS AND HEALTH PROMOTION DELIVERY SYSTEMS

The purpose of this effort was to assess, in detail, the organizational structure and function, and the delivery systems employed by the United States, Canada, and Australia in each country's attempts to promote citizen fitness and health. Assessments were designed to determine:

- How national and departmental health and fitness initiatives arose
- How these initiatives were formalized into broad goals, directives of mandates
  - -- identification of national, departmental, and program level goals
- To whom and how these mandates were entrusted
- Which programs have been developed to meet these goals
  - -- program activities
  - -- program materials
  - -- program resources

  Information regarding program activities and resources centered around the seven categories of program implementation/accomplishment presented in ODPHP's ten-year plan. These foci include: research and demonstration efforts; monitoring efforts; information dissemination; provision of technical assistance; provision of health education services; provision of grants or seed monies to states and localities; and person power development efforts.

- How they were implemented
  - -- the factors affecting implementation at each stage of the process
  - -- the funding, accounting, and monitoring mechanisms that are employed to ensure that goals and objectives are accomplished.
- The specific processes and feedback mechanisms involved in program implementation and further development
- The approaches or structural features which have been found to be most successful and the reasons underlying planned changes
  - -- national strategy
  - -- agency strategies
  - -- private sector strategies

The assessment of each of the three nations' health promotion delivery systems was to serve as a ready resource to ODPHP in its attempts to broaden and further define efforts to coordinate and extend health and fitness promotion efforts in the U.S. By detailing the philosophy and actual workings of the two proven nationally sponsored programs in Canada and Australia, the study was aimed at generating meaningful comparisons and contrasts with the U.S. system. This process facilitated the derivation of a set of recommendations regarding feasible avenues of implementation and growth for the U.S. system.

The cross-national assessment began with an examination of the development and implementation of fitness and sports promotion efforts in the United States. Granville staff interviewed representatives of numerous Federal agencies and three State governments (California, Georgia and Ohio). In addition, Granville interviewed representatives of sports bodies and private organizations involved in overseeing, funding, or implementing pertinent national level activities. The assessment of the U.S. system included the most extensive data collection efforts of the three country-specific studies. In addition to reporting on the system as a whole, write-ups on each of the organizations investigated were appended.

The Canadian assessment was done by means of on-site investigations at the Federal and Provincial levels. Of the ten Canadian provinces, Ontario and Alberta were selected for assessment. Interviews were conducted with representatives of various government agencies and relevant parties outside of government.

Because of perceived cost constraints and the preferences of ODPHP, no site visits were made to assess the Australian system. Instead, telephone contact was made with relevant agencies in the Australian Commonwealth (Federal) government and in the governments of the States of Victoria and New South Wales. Interviews were conducted and documents were solicited.

The framework of the three country-specific assessments treated national level policies and programs first, followed by State or Provincial activities. At each stage of the assessments, physical fitness and sports were dealt with separately.

The study culminated with a final assessment report which synthesized the previous assessments and identified salient points and recommendations for the United States system. Maintaining the dichotomy between fitness and sports, the report dealt in turn with the national/Federal level in the three countries, subnational jurisdictions, and conclusions and recommendations. As in the case of the reports on each of the three countries, major topics of discussion included:

- The existence of national fitness and sports policies and the process by which they were developed
- Administrative structure
- Resources
- Types of programs
- Transmission of policy to subnational levels.

COMMUNITY FITNESS PROGRAMS, EMPLOYEE FITNESS PROGRAMS, AND DEMONSTRATION CENTER SCHOOLS

As described in the preceding chapter, these three program clusters were to be addressed through surveys of program implementors. In each case, Granville completed the initial tasks of finalizing the instruments drafted in the Evaluation Methodologies report and preparing the necessary materials for OMB clearance. The instruments and clearance materials were submitted to ODPHP in August and September of 1980. After an extremely lengthy period of review at various points within HHS, the submissions were sent forward to OMB. In the Fall of 1981, OMB disapproved the survey approach in all three clusters. This brought about another situation in which discussions took place between Dr. Iverson and the Granville Project Director regarding alternative approaches. It was agreed that the Community Fitness and Employee Fitness clusters would be combined in a study involving a review of secondary data. A description of that work is presented in the following section. Final disposition of the Demonstration Center Schools clusters was deferred. The later decision regarding alternate work for that cluster is discussed in a subsequent section.

THE NATURE AND EXTENT OF COMMUNITY AND EMPLOYEE FITNESS PROGRAMS

This study was planned to provide constructed descriptions of current community employee and school fitness programs, including estimates of program usage and outcomes. The approach taken in identifying sources was to conduct several bibliographic searches and to make innumerable follow-ups with known and potential information sources. Although a number of books and articles were reviewed, the focus of the effort was on obtaining broad-based survey data, preferably national in scope.

The investigation revealed no national information about community fitness programs. Only data from individual organizations such as the YMCA and YWCA were found; that information was

not very detailed. The investigation of employee fitness programs also yielded only fragmentary and generally unreliable information. The surveys done in that area were found to suffer from arbitrary sample selection, deletion of small companies, limitations related to data collection procedures, and analyses based on small numbers. Well-designed studies tended to be restricted to specific occupational groups or individual companies and were, thus, not generalizable.

Existing information about school fitness/physical education programs was similarly deficient. Most of the available information deals with college sports programs and is not very useful for making estimates regarding fitness programs and participation. Information on elementary and high school programs was even more limited.

Although existing information about community, employee, and school-based fitness programs and activities was critiqued and reported, its paucity (while confirming the efficacy of the originally planned survey approach) led to a shift in the primary focus of the study. Granville's search procedures identified a number of national surveys of the general population regarding fitness-related behavior, attitudes, and knowledge. Since obtaining estimates of program usage was one aim of the study, these surveys were considered to be within the scope of work and were of interest to OLPHP. Thus, they were included in the review and consumed most of the effort from then on. The topics covered in the examination of survey results included:

- Levels and types of physical activity
- Reasons for physical activity
- Attitudes and perceptions
- Changes in patterns of physical activity (for the general population betweeen 1972 and 1980) and for individuals in the year or two preceding the surveys)

- Knowledge about fitness and exercise and sources of information.

In addition to reporting survey results, the methodological aspects of the surveys were critiqued. The analysis of methodologies, questionnaire construction, and results led to identification of issues which should be considered in further explorations of physical activity patterns. Toward that end, Granville developed a questionnaire on leisure time physical activity which we believe will avoid many of the confounding problems found in past surveys. The draft final report was reviewed by the Project Officer and ODPHP staff and staff of the National Center for Health and Statistics. A revised report was submitted to ODPHP on September 30, 1982. In addition, the results of the study were submitted to ODPHP in a condensed form suitable for publication in a professional journal. In October, 1982, this document was submitted to AAHPERD for possible publication in the Journal of Physical Education and Recreation.

DEVELOPMENT OF PHYSICAL FITNESS AND EXERCISE MEASURES

It was noted earlier that the study regarding Demonstration Center Schools was derailed by OMB's decision not to approve the planned survey approach. By agreement with the Project Officers (Dr. Iverson and, later, Mr. Montes) the decision regarding final disposition of the remaining funds for this cluster was deferred until May, 1982. At that time, Mr. Montes and Dr. Kolbe of ODPHP put forth to Granville the idea of developing measures of the fitness status of children and youth ages 10 to 17 and their participation in physical activities. The measures were to be developed through panels of experts representing various organizations and backgrounds.

The need for the effort was connected to ODPHP's concern for achieving and measuring progress toward several of the Objectives for the Nation for 1990 which directly relate to children and youth. The fitness measures and an activity question-

naire were to be used as the basis for an ODPHP-sponsored study beginning in the Fall of 1982.

The effort undertaken by Granville was structured in terms of the following three objectives:

- Identify and attempt to achieve agreement about the most valid set of measures to use for determining the physical fitness status of schoolchildren and youth ages 10 through 17 as part of a normal clinical procedure

- Identify and attempt to achieve agreement about the most feasible, valid, and reliable set of measures to use for determining the physical fitness status of schoolchildren and youth ages 10 to 17 through school-based mass-testing programs

- Identify and attempt to achieve agreement about items to be included in a questionnaire that could be used to monitor trends and patterns of participation in physical activities by schoolchildren and youth, including participation in cardiorespiratory activities that can be carried into adulthood, participation in public recreation programs in community facilities and participation in other physical activities.

Granville's initial task was to collect relevant existing instruments and review relevant literature. The study team already was familiar with some of the pertinent materials as a result of involvement in the other segments of this contract. Among the fitness tests reviewed were the AAHPERD Youth Fitness Test, the AAHPERD Health-Related Physical Fitness Test, the Canada Fitness Survey and the National Health and Nutrition Examination Survey. In preparation for the panel meeting dealing with development of a questionnaire to assess physical activity patterns, Granville prepared a draft instrument to provide a focal point for the discussion.

Another task involved the identification of experts in the field of physical fitness who together would represent a balanced mixture of views on the design of the instrument to be developed. This task was accomplished through consultation with representa-

tives of ODPHP, the President's Council and AAHPERD. This consultation resulted in identification of experts who were to be asked to participate on the three panels charged with the design of the physical fitness status instruments. Granville was responsible for soliciting the participation of candidates for the panels and arranging their accommodations.

The two panels discussing physical fitness status measures each met for one and one half days; the panel concerned with the physical activity patterns questionnaire met for one day. In all cases, in addition to the experts convened, the panels included representatives for ODPHP, the President's Council, AAHPERD, and Granville. All of the panels met at Granville's offices.

Following each panel meeting, Granville produced a draft report on the proceedings, including description of the agreed-on measures and a synopsis of the associated discussions. These reports were sent to the panel members, ODPHP, the President's Council's staff, and AAHPERD for review and comment.

The fitness measures agreed on by the first two panels for use in clinical and mass-testing situations were conceived in the context of a perspective on fitness which included its relationships to both health and physical performance. The measures included the following five elements:

- Cardiorespiratory endurance
- Muscular strength
- Muscular endurance
- Body composition
- Flexibility.

The questionnaire developed by the third panel included activities carried out in four settings:

- School physical education programs
- School extracurricular programs
- Public recreation programs
- Other activities.

A draft report encompassing all three sets of measures was prepared and submitted to ODPHP on October 19, 1982. Based on their comments, a final document was produced and submitted as of October 29, 1982.

APPENDIX

LIST OF REPORTS

PHASE I

Description of Program Clusters (January 10, 1979)

Assessment of Program Operations (May 15, 1979)

Literature Review and Synthesis (May 30, 1979)

Design Concepts for Evaluating Mass Media Programs (June 8, 1979)

Design Concepts for Evaluating Fitness and Capacity Building Programs (June 20, 1979)

Evaluation Methodologies (March 5, 1980)

Final Summative Report (June 2, 1980)

PHASE II

Assessment of the Establishment and Operations of Seven Governors' Councils on Physical Fitness and Sports (July 21, 1981)

Assessment of Testing and Awards Programs (July 29, 1981)

Inventory of Health and Physical Fitness Promotional Materials, Research and Articles from Periodicals of General Interest (December 11, 1981)

A Report on the Fitness and Health Promotion Delivery Systems of the United States (July 21, 1981)

A Report on the Fitness and Sports Promotion and Delivery Systems of Canada (October 6, 1981)

A Report on the Fitness and Sports Promotion and Delivery Systems of Australia (November 13, 1981)

A Comparative Assessment of Physical Fitness and Sports Promotion and Delivery in the United States, Canada, and Australia (February 23, 1982)

An Assessment of the Nature and Extent of Community and Employee Fitness Programs and Levels of Participation (September 30, 1982)